

Title:

Stochastic mortality modelling for multiple populations

Abstract:

This thesis deals with the possibilities of modelling and forecasting of age-specific mortality rates. The introductory part summarizes the basic terms from demography, which are related to mortality, and specifies elementary approaches to the mortality modelling. Subsequently there are in detail described the three most commonly used stochastic mortality models – Lee-Carter, Renshaw-Haberman and Cairns-Blake-Dowd. The fundamental part of this thesis deals with the possibilities of using these models for mortality modelling simultaneously in correlated populations. These theoretical bases are in the final part of this thesis numerically illustrated on the mortality models for populations of Czech and Slovak Republic.